

Demonstration of an Effective IPM Program for Fungal Leaf Blight Diseases of Carrots

Project Leader: George Abawi, Department of Plant Pathology
Cornell University, Geneva, NY 14456

Cooperators: Carol MacNeil, Coop. Extension, Ontario-Yates Counties
Lee Stivers, Coop. Extension, Lake Placid Region
Gibb Scott, Comstock - Michigan Fruit
Don Sweet, Private Consultant
Abby Seaman, Extension IPM Specialist
Tim Widmer, Postdoctoral Fellow, Plant Pathology - Geneva

Project Assistants: John Ludwig, Laurie Scott and Josh Bossard

Introduction

Fungal leaf blights (spots) caused primarily by *Alternaria dauci* and also *Cercospora carotae* are among the major diseases impacting carrot production in New York. Although considerable information is available on the epidemiology and even the forecasting of these diseases, their control continues to depend largely on the frequent application of fungicidal sprays. In New York, Bravo 720 is the fungicide most often used and is applied up to 8 times per season (at a rate of 2 pts./acre/application). Rovral and Benlate are also available and used on a limited scale on carrots, but generally when symptoms of *Rhizoctonia* foliar blight (*Rhizoctonia solani* and its sexual stage) and white mold (*Sclerotinia sclerotiorum*) diseases, respectively are also observed.

Leaf blights of carrots were extensively studied during the past two years in New York under a collaborative (G. Abawi, C. MacNeil, W. Smith, and L. Stivers) project entitled "Pesticide Use Assessment and Benefits of Nematicides and Fungicides to Marketable Yield of Carrots" that was funded by the NAPIAP and NE PIAP programs. In 1996, results from four fungicide trials conducted in four commercial fields (2 on organic and 2 on mineral soils) showed that leaf blight severity in plots sprayed with Bravo alone was not significantly different from those sprayed with the Bravo in combination with Benlate or Rovral. In addition, it became clear that there is a great need to validate a monitoring scheme to determine the critical time needed to initiate the first and subsequent sprays, if needed to control these diseases, reduce the amount of fungicides used, and improve quality and profitability of carrots. In 1997, four trials were conducted in collaboration with interested growers (Call, Kludts, Williams, and Willson) to weekly monitor the initiation and development of leaf blights. At each location, participating growers sprayed their fields according to their normal schedule or the reports of their crop consultant.

For a printed copy of the entire report, please contact the NYS IPM office at:

IPM House
630 W. North St.
New York State Agricultural Experiment Station
Geneva NY 14456
315-878-2353